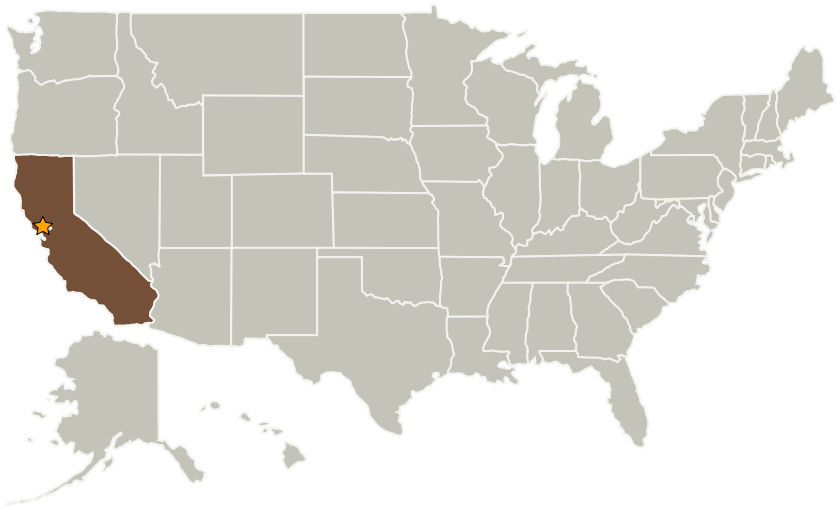
Ultrasensitive Atmospheric Analyzer for Miniature UAVs, Phase I

Completed Technology Project (2009 - 2009)

Project Introduction

In this SBIR Phase I effort, Los Gatos Research (LGR) proposes to develop a highly-accurate, lightweight, low-power gas analyzer for quantification of water vapor (H2O), carbon dioxide (CO2), and methane (CH4) aboard miniature unmanned aerial vehicles (mini-UAVs). This analyzer, which will exploit LGR's patented Off-Axis ICOS technology, will be the first sensor capable of meeting the stringent weight, power, and environmental requirements for miniature UAV deployments. Such deployments are critically important to NASA's Earth Science Division, because they enable more efficient and cost effective Earth observation measurements. These measurements complement current satellite observations by providing higher horizontal resolution and vertical profiling, enabling better quantification of carbon sources and sinks.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Los Gatos Research	Supporting Organization	Industry	Mountain View, California

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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California

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.1 Safe All Vehicle Access